

# FORMULA FIFTEEN CLASS RULES

## Section A - Fundamental Rules

- A.1. One Design Class Status The Formula Fifteen is a strict one design class as governed by these rules.
- A.2. Authority The Australian national authority shall be the **Formula Fifteen Skiff Association**, hereafter abbreviated to **FFSA**.
- A.3. Interpretations Of Class Rules Any disputes regarding interpretation of these rules shall be referred to the FFSA for a ruling.
- A.4. Class Administration The class shall be administered by the FFSA.
- A.5. Hull Registration Hulls built from licensed moulds shall be registered with the FFSA by the payment of the registration fee as per the Association Rules. An official FFSA badge displaying registration number shall then be issued by the FFSA for the hull. All registered hulls shall bear the FFSA badge.
- A.6. Amendments to Class Rules The FFSA in accordance with its Association Rules shall propose amendments to the Class Rules.

## Section B - Conditions for Racing

- B.1. Hull & Hull Fittings The hull shall comply with class rules in force at time of manufacture. Hull fittings shall comply with current class rules.
- B.2. Watertight Hull The watertight integrity of the hull must be maintained.
- B.3. Crew The crew shall consist of two persons. Only one person shall be on the trapeze at any one time.
- B.4. Spars & Rigging Spars shall comply with class rules at time of fit-out. Spar fittings and all rigging shall comply with current class rules.
- B.5. Centreboard, Rudder Blade and Rudderbox The centreboard, rudder blade and rudder box shall comply with class rules at time of manufacture.
- B.6. Sails During any one event only one set of sails, comprising mainsail, jib and spinnaker, may be used.
- B.7. Replacements During any one event, parts and equipment (including hull, spars and sails) may only be replaced if damaged beyond repair or lost. Such replacements may only be made with the approval of the race committee.
- B.8. Standing Rigging Standing rigging shall not be adjusted when racing.
- B.9. Hull weight The minimum weight of the hull shall be **83kg**.  
The hull shall be weighed in a dry condition and shall include all fixed and shackled fittings, vang and downhaul rope systems, mainsheet bridle, rudder box, bowsprit, bowsprit lines, foot loops and hiking straps.  
Main sheet, jib sheets and spinnaker sheets must be removed for weighing.
- B.10. Corrector weights The total weight of corrector weights shall not exceed 4kg. Such weights shall be firmly attached with screws to the cockpit floor on the centreline between the centreboard case and the mast bulkhead.
- B.11. Advertising Formula Fifteens Shall be permitted to carry Category C advertising and shall abide

by Rule 79 of the ISAF Racing Rules of Sailing.

- B.12. Divisions** There shall be two distinct racing divisions within the Formula Fifteen Class which shall be known as **Fractional** division and **Masthead** division

### **Section C - Detailed Fit-out Rules.**

**Only items listed in Section C may be used or fitted to the boat. If something is not detailed it is not allowed.**

- C.1.1. Hull** The hull shall be built from moulds approved by **FFSA** and shall be constructed according to the *Construction Manual*.
- C.1.2. Hull surfaces** New hulls shall be finished in polyester gelcoat. Non slip surfaces may be applied where required and can be of any material including painted coatings or adhesive strips.  
Hull surfaces may be refinished with gelcoat or paint as required.
- C.2.1. Centreboard** The centreboard shall be built from moulds approved by **FFSA** and shall be constructed according to the *Construction Manual*  
Centreboard surfaces may be refinished with gelcoat or paint as required.
- C.2.2. Rudderblade** The rudderblade shall be built from moulds approved by **FFSA** and shall be constructed according to the *Construction Manual*  
Rudderblade surfaces may be refinished with gelcoat or paint as required.
- C.2.3. Centreboard Case** The centreboard case may be fitted with flexible packing material to prevent scratching of the centreboard.
- C.2.4. Rudderbox & Tiller** The rudderbox and tiller shall be constructed according to the *Construction Manual* and shall be fitted to the transom frame using a 5/16" or 8mm stainless steel pivot pin running through acetal bushes.
- C.2.5. Tiller Extension** Any type of tiller extension may be used including twin tiller extensions.
- C.3.1. Transom Frame** The transom frame shall be constructed according to the *Construction Manual* and shall be screwed centrally to the face of the transom.
- C.3.2. Spinnaker Sock Mouth Bar** The Spinnaker Sock Mouth Bar shall be constructed according to the *Construction Manual* and shall be fitted to the gunwales using 4 x 3/16" bolts.  
The forward edge of the mounting flange shall measure between **755mm and 775mm** from the front corner of the gunwale.
- C.3.3. Bow Fitting** The bow fitting shall be constructed according to the *Construction Manual* and shall be fitted to the gunwales using 6 x 3/16" bolts.  
The forward edge of the base flange shall measure **18mm (+/-2mm)** from the forward face of the gunwale at the bow when measured horizontally.
- C.3.4. Mast Step** The mast step shall be constructed according to the *Construction Manual* and shall be fitted to the deck using 6 x 10g screws.  
The aft face of the mast heel tenon shall measure **40m (+/-5mm)** from the face of the bulhead projected to deck level.
- C.3.5. Chainplates** The chainplates shall be constructed according to the *Construction Manual* and shall be fitted using 3 x 5/16" bolts in the location detailed in the *Construction Manual*. As the chainplate fixing bolts are fitted from inside the hull cavity, the chainplates are supplied fitted with a new hull.

- C.3.6. Bowsprit Bushes** The bowsprit bushes shall be made from acetal and machined to accept the 54mm O.D. bowsprit (recommended 55mm acetal I.D.) The acetal O.D. shall be 72mm minimum.  
The forward bush shall be **140mm (+/-2mm)** in length and be fitted within the bow fitting with it's forward edge prutruding **10mm (+/-5mm)** past the vertical face of the gunwale at the bow.  
The rear bush shall be **50mm (+/-2mm)** in length and be fitted centrally on the moulded mounting provided.
- C.4.1. Jib Luff Tensioner** A jib luff tensioner of maximum purchase 4:1 may be fitted. There is no restriction on the type of fittings used or on the location of cleat/cleats.
- C.4.2. Jib Sheet Leads  
Conventional Jib** Jib sheet leads shall be of the swivelling deadeye type sliding on a track with spring loaded pin-in-hole positioning.  
The track shall be fitted directly to the cockpit floor parallel to the centreline. The distance between the boat centreline and track centreline shall measure between **330mm and 340mm**.  
The aft end of the metal track shall measure no less than **1900mm** from the face of the transom when measured along the cockpit floor parallel to the floor batten.
- C.4.3. Jib Sheet Cleats  
Conventional Jib** The jib sheat shall run through a turning block and camcleat both of which shall be mounted directly to the top face of the moulded mounting provide on the cockpit floor. Fairleads over camcleats are permitted.  
No part of the turning block or cleat may extend beyond the extremities of the top face of the moulded mounting.
- C.4.3.a Self tacking Jib** A self tacking jib is allowed and is governed by the following:  
The jib shall measure according to the Self Tacking Jib measurments in Section E.  
The jib shall be sheeted to a transverse track mounted to the front faces of the moulded mountings. The type, brand, curve radius of the track is unrestricted.  
The method of leading the sheet, location of pulleys and cleats is unrestricted.
- C.4.4. Trapeze Line  
Retention** The trapeze lines may be held in position by shockcord. The location of fittings to retain the shockcord on the hull is unrestricted.
- C.4.5. Centreboard  
Retention** The centreboard shall be held in position whilst in the case by rope, shockcord or a combination of both. A single saddle shall be fitted for this purpose.  
The centreboard saddle shall be fitted directly to the cockpit floor on the boat centreline. The aft hole of the saddle shall measure between 30mm and 60mm from the top front of the centrecase opening.
- C.4.6. Hiking Straps** Hiking straps shall be made from 50mm nylon webbing. Their location and method of attachment is unrestricted. Shockcord may be used to suspend the hiking straps off the cockpit floor.
- C.4.7. Mainsheet  
System** The mainsheet shall be rigged according to the Main Systems diagram in [Drawing C](#)  
  
The mainsheet blocks shall have a minimum diameter of 40mm except for the ratchet block which has no diameter restriction.
- C.4.8. Mainsheet  
Ratchet Block** The mainsheet ratchet block shall be mounted on the top face of the moulded mounting provided. A swivelling base with a cleat for the mainsheet is permitted and if used must be fixed to the top face of the moulded mainsheet block mounting.  
The measurment from the top face of the mainsheet moulded mounting to the ratchet block sheave centre shall be a maximum of **150mm**.

- C.4.9. Mainsheet Bridle** The mainsheet bridle shall be made of any type of rope other than wire and shall be attached to the holes provided on the top transom mounting flanges of the transom frame. The length of the bridle is unrestricted and may be adjusted whilst racing. The method of adjustment, location of additional pulleys, cleats etc is unrestricted.
- C.4.10. Vang Saddle** The vang saddle shall be fixed to the mast bulkhead on the boat centreline. This saddle shall be used to mount blocks for the purpose of leading the vang controls aft to the skipper. This saddle shall also be used to mount blocks for the purpose of leading the main downhaul controls aft to the skipper.
- C.4.11. Vang** The vang shall have a purchase of 18:1 and shall be rigged according to the Main Systems diagram in [Drawing C](#). All blocks used in the vangsystem shall have a minimum diameter of 20mm. The use of wire in the vang system is prohibited.
- C.4.12. Main Downhaul** The main downhaul shall have a purchase of 8:1 and shall be rigged according to Main Systems diagram in [Drawing C](#). All blocks used in the main downhaul system shall have a minimum diameter of 20mm. The use of wire in the main downhaul system is prohibited.
- C.4.13. Vang and Main Downhaul Control Lines** The control lines for the vang and main downhaul shall lead from blocks attached to the vang saddle through blocks fixed to the moulded mounting adjacent to the chainplates, and then aft through turning blocks and then to cleats. These final turning blocks and cleats shall be mounted directly to the face of the cockpit side. The type of cleats or blocks used is unrestricted provided the blocks have a sheave diameter of not less than 20mm. The vang and main downhaul cleats shall be mounted below the edge between the cockpit side and the side deck. The vang and main downhaul cleats shall be mounted between **1100mm and 1300mm** from the face of the transom at floor level.
- C.5.1. Spinnaker Sheet Blocks** The spinnaker sheet blocks shall be attached to saddles bolted through the gunwales. The type of blocks used are unrestricted. The spinnaker block saddle shall be fixed to the gunwales between **1700mm and 2000mm** from the transom face when measured along the gunwale.
- C.5.2. Bowsprit System** The bowsprit shall be operated by a line attached to the aft end and then lead forward through the bowsprit turning block attached to the aft face of forward bulkhead, and then aft ending at the bowsprit line/halyard block. The bowsprit turning block shall have a minimum diameter of 20mm. The bowsprit line can be of any material other than wire. The bowsprit line/halyard block shall have a minimum diameter of 30mm.
- C.5.3. Spinnaker Halyard** The spinnaker halyard shall run down the mast and through the mast step turning block, then forward and through the bowsprit line block, then aft and through the spinnaker halyard cam cleat. From the cleat, the halyard shall lead aft and through the hoist/retrieve block, then aft and through the spinnaker sock turning block. The halyard then leads forward into the spinnaker sock where the halyard becomes the retrieving line. The mast step turning block shall be attached to the vertical flange on the starboard side of the mast step. The spinnaker halyard cam cleat shall be a cam type cleat with no size restriction and may incorporate a fairlead in front of and/or above the cleat. The cleat shall be mounted on the aft end of the foredeck on the starboard side. The distance between the boat centreline and the cleat

centreline shall measure **75mm(+/-5mm)**

The hoist/retrieve block shall be mounted on a saddle which shall be screwed to the top face of the moulded mounting. The block shall have a minimum diameter of 30mm.

The spinnaker sock turning block shall be mounted directly to the top face of the moulded mounting. The block shall have a minimum diameter of 30mm.

**C.5.4. Spinnaker Sock**

The spinnaker sock shall be made from flexible woven material and shall attach to the top face of the spinnaker sock mouth bar. The bottom of the sock shall extend forward and attach to the deck so as to protect the spinnaker from the action of the bowsprit and the action of the jib downhaul. The aft end of the sock shall be fixed directly to the cockpit floor in line with the spinnaker sock turning block and shall not extend further aft than the forward side of the spinnaker sock turning block moulded mounting.

**C.6.1. Sheets**

Sheets and control lines are unrestricted as to length, diameter and taper provided they are not made from wire.

**Section D - Spars.**

**D.1. Mast**

**D.1.1. Mast Section**

The mast section used shall be a Goldspar section incorporating a 60mm diameter x 2.00mm wall aluminium tube lower section with a spun tapered aluminium top section with tip diameter 37mm and 1.5mm wall. The length of lower and top sections shall be those specified in **Drawing A**.

**D.1.2. Mast fitting locations**

Mast fittings shall be mounted on the mast in the locations specified in **Drawing A**.

**D.1.3. Mast Fittings**

Mast fittings shall be restricted to those listed in **Table A**.

**D.1.4. Spreaders, Fractional**

A single set of spreaders shall be fitted as shown in **Drawing A**. Spreader rake is unrestricted but shall not be altered during racing. The length of the spreader arms shall be **between 340mm and 350mm** when measured from the face of the mast to the centre of the shroud.

**D.1.5. Spreaders, Masthead**

In addition to the single set of spreaders specified for the fractional rig, the masthead rig shall be fitted with a set of spreaders immediately above the hounds as shown in **Drawing A** to spread the cap shrouds. The length and rake of these spreaders shall be unrestricted.

**D.2. Standing Rigging**

**D.2.1. Shrouds**

The shrouds shall be fastened to the mast with T-ball type fittings and shall be made from 1x19 or 1x7 construction, 1/8" or 3mm diameter stainless steel wire. The shrouds shall be attached to the chainplate outer holes using multi-position pin type shroud adjusters with a minimum adjustment increment of 4mm.

**D.2.2. Lower Shrouds**

The lower shrouds shall be fastened to the mast with T-ball type fittings and shall be made from 1x19 or 1x7 construction, 1/8" or 3mm diameter stainless steel wire. The lower shrouds shall be attached to the chainplate inner holes using multi-position pin type shroud adjusters with a minimum adjustment increment of 4mm.

**D.2.3. Forestay**

The forestay shall be made from 1x19 or 1x7 construction, 1/8" or 3mm stainless steel wire. The forestay shall be fitted with a t-ball fitting at the top end and an eye fitting at the bottom end. The distance from the bearing point to bearing point shall measure between 5520mm and 5530mm.

**D.2.4. Cap Shrouds** The Masthead rig shall have fitted a set of cap shrouds which shall run from the top of the mast to the chainplates through the upper spreaders. The type of fitting used to attach the shrouds to the mast is unrestricted providing it does not extend beyond the top of the mast. The upper shrouds shall be made from 1 x 19 construction stainless steel wire of diameter between 2.4 mm and 3.2mm. The cap shrouds shall be attached to the chainplate middle holes using multi-position pin type shroud adjusters with a minimum adjustment increment of 4mm.

### **D.3. Halyards**

**D.3.1. Main Halyard** The main halyard may be made from any type of material and shall be locked externally at the base of the mast in the location shown in **Drawing A**. The main sail shall be able to be hoisted and lowered with the boat in an upright position.

**D.3.2. Jib Halyard** The jib halyard may be made from any type of material and shall be locked externally at the base of the mast in the location shown in **Drawing A**. The jib halyard lock may have a maximum of five position settings. The jib shall be able to be hoisted and lowered with the boat in an upright position.

**D.3.3. Spinnaker Halyard** The Spinnaker halyard may be made from any type of rope other than wire.

### **D.4. Trapeze**

**D.4.1. Trapeze lines** The trapeze lines upper ends shall be attached to tangs welded to the shroud T-Ball fittings. The trapeze lines shall be made from any type of rope other than wire.

**D.4.2. Tapeze Fittings** There are no restrictions on the type of handles, rings, hooks etc and the length of trapeze lines may be adjustable while sailing.

### **D.5. Boom**

**D.5.1. Boom Section** The boom section shall be an 80mm outside diameter round aluminium tube with a 3mm wall thickness. The ends of the boom section shall be cut as shown in **Drawing B**.

**D.5.2. Boom Fittings Locations** Boom fittings shall be mounted on the boom in the locations specified in **Drawing B**.

**D.5.3. Boom Fittings** Boom fittings shall be restricted to those listed in **Table A**.

### **D.6. Bowsprit**

**D.6.1. Bowsprit Section** The bowsprit section shall be a carbon fibre tube of 54mm outside diameter with a wall thickness of 2mm.

**D.6.2. Bowsprit Fittings Locations** Bowsprit fittings shall be mounted on the bowsprit in the locations specified in **Drawing C**.

**D.6.3. Bowsprit Fittings** Bowsprit fittings shall be restricted to those listed in **Table A**.

## Section E - Sails.

### E.1. Construction and Measuring

- E.1.1. Cloth weight** Weight of cloth shall not be less than 135g in the mainsail and jib.
- E.1.2. Cloth construction** The cloth used in the mainsail and jib shall have a woven component of not less than 50mm between strands in both directions.
- E.1.3. Measuring** All measurements shall be made with the sail layed on a flat surface, with the part being measured being stretched just sufficiently to remove wrinkles across the line of the measurement being taken.
- E.1.4. Dry condition** Sails shall be in a dry condition when measured.

## MAST HEAD RIG

### E.2. Mainsail

- E.2.1. Mainsail Profile** The mainsail shall be fitted with five full length battens. The centrelines of the battens shall run through the changes in direction of the leach. The locations of the changes in direction of the leach shall be established by radial distances from from the intersection of the top edge of the headboard and the forward edge of the boltrope. In addition, the girth of the sail shall be measured at each change in direction of the leach. The girth shall be measured between the change in direction of the leach and the shortest length to the front of the boltrope.

**E.2.2. Mainsail Measurements**

Mainsail radial distances head to leach:

|          |                |
|----------|----------------|
| Batten 1 | 570mm +/-10mm  |
| Batten 2 | 1045mm +/-10mm |
| Batten 3 | 1610mm +/-10mm |
| Batten 4 | 2825mm +/-10mm |
| Batten 5 | 4390mm +/-10mm |
| Clew     | 6500mm max.    |

Mainsail girth distances, leach to luff:

|          |             |
|----------|-------------|
| Batten 1 | 580mm max.  |
| Batten 2 | 1025mm max. |
| Batten 3 | 1430mm max. |
| Batten 4 | 1905mm max. |
| Batten 5 | 2230mm max. |

Mainsail batten at luff, measured from head (+/-50mm)

|          |        |
|----------|--------|
| Batten 1 | 380mm  |
| Batten 2 | 820mm  |
| Batten 3 | 1390mm |
| Batten 4 | 2630mm |
| Batten 5 | 4270mm |

- E.2.3. Mainsail Foot** The foot of the mainsail shall measure maximum 2470mm from *leach/foot intersection*

point to the foot/ forward edge of luff boltrope intersection point.

- E.2.4. Mainsail Window** The mainsail may be fitted with a clear window of maximum size 1.0m2.
- E.2.5. Mainsail Head Angle** The angle between the luff and the leach at the head shall be 90 degrees.
- E.3. Jib**
- E.3.1. Measurement method** Measurements of jib leach, luff and foot shall be taken to the intersections of the projections of the measured edge and its adjacent edge.
- E.3.2. Jib measurements Conventional**
- a. The jib luff shall measure between 4940mm and 4960mm.
  - b. The jib leach shall measure between 4490mm and 4510mm.
  - c. The jib foot shall measure between 1970mm and 1990mm.
- E.3.3. Jib measurements Self Tacking**
- a. The jib luff shall measure between \_\_\_\_ mm and \_\_\_\_ mm.
  - b. The jib leach shall measure between \_\_\_\_ mm and \_\_\_\_ mm.
  - c. The jib foot shall measure between \_\_\_\_ mm and \_\_\_\_ mm.
- E.3.4. Jib Leach Roach Conventional** No part of the jib leach shall extend outside a straight line between the head measurement point and the clew measurement point by more than 25mm.
- E.3.5. Jib Leach Roach Self Tacking** No part of the jib leach shall extend outside a straight line between the head measurement point and the clew measurement point by more than \_\_\_\_mm.
- E.3.6. Jib Battens Conventional** Three battens of between 150mm and 200mm in length shall be fitted to the leach and placed so as to divide the leach into four equal parts (+/-50mm)
- E.3.7. Jib Battens Self Tacking** Three full length battens shall be fitted, located so as to divide the leach into four equal parts (+/-50mm)
- E.3.8. Headboards** Headboards are not permitted in jibs.
- E.3.9. Jib Foot Roach** No part of the jib may extend more than 150mm below a straight line between the clew measurement point and the tack measurement point, when measured perpendicular to to this line.
- E.3.10 Jib Window** The jib may be fitted with a clear window of maximum size 0.20m2.

## **E.4. Spinnaker**

- E.4.1. Spinnaker Measurements**
- a. The spinnaker luff shall measure between 8300mm and 8500mm.
  - b. The spinnaker leach shall measure between 7000mm and 7200mm.
  - c. The spinnaker foot shall measure between 3900mm and 4100mm.
  - d. The measurement from half foot to head shall measure between 8050mm and 8250mm.
  - e. The measurement from half leach to half luff shall measure between 3650mm and 3850mm

## FRACTIONAL RIG

### E.5. Mainsail

#### E.5.1. Mainsail Profile

The mainsail shall be fitted with five full length battens. The centrelines of the battens shall run through the changes in direction of the leach. The locations of the changes in direction of the leach shall be established by radial distances from from the intersection of the top edge of the headboard and the forward edge of the boltrope. In addition, the girth of the sail shall be measured at each change in direction of the leach. The girth shall be measured between the change in direction of the leach and the shortest length to the front of the boltrope.

#### E.5.2. Mainsail Measurements

##### Mainsail radial distances head to leach:

Batten 1 \_\_\_mm +/-10mm  
Batten 2 \_\_\_mm +/-10mm  
Batten 3 \_\_\_mm +/-10mm  
Batten 4 \_\_\_mm +/-10mm  
Batten 5 \_\_\_mm +/-10mm  
Clew \_\_\_mm max.

Mainsail distance head to tack (straight line) \_\_\_mm +/-10mm

##### Mainsail girth distances, leach to luff:

Batten 1 \_\_\_mm  
Batten 2 \_\_\_5mm  
Batten 3 \_\_\_mm  
Batten 4 \_\_\_mm  
Batten 5 \_\_\_mm

##### Mainsail batten at luff, measured from head (+/-50mm)

Batten 1 \_\_\_mm  
Batten 2 \_\_\_mm  
Batten 3 \_\_\_mm  
Batten 4 \_\_\_mm  
Batten 5 \_\_\_mm

#### E.5.3. Mainsail Foot

The foot of the mainsail shall measure maximum 2470mm from *leach/foot intersection point* to the *foot/ forward edge of luff boltrope intersection point*.

#### E.5.4. Mainsail Window

The mainsail may be fitted with a clear window of maximum size 1.0m<sup>2</sup>.

#### E.5.5. Mainsail Head Angle

The angle between the luff and the leach at the head shall be 90 degrees.

### E.6. Jib

#### E.6.1. Measurement method

Measurements of jib leach, luff and foot shall be taken to the intersections of the projections of the measured edge and its adjacent edge.

#### E.6.2. Jib measurements Conventional

a. The jib luff shall measure between \_\_\_mm and \_\_\_mm.

